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*Epidemiologic Notes and Reports*

## Dengue Fever Among U.S. Military Personnel — Haiti, September–November, 1994

Since September 19, 1994, approximately 20,000 U.S. military personnel have been deployed to Haiti as part of Operation Uphold Democracy. To monitor the occurrence of mosquitoborne illnesses (including dengue fever [DF] and malaria) among deployed military personnel, on September 19 the U.S. Army established a surveillance system for febrile illness. Before deployment, all military personnel were instructed to take antimalarial chemoprophylaxis, either chloroquine phosphate (500 mg weekly) or doxycycline (100 mg daily). This report summarizes surveillance findings for September 19–November 4.

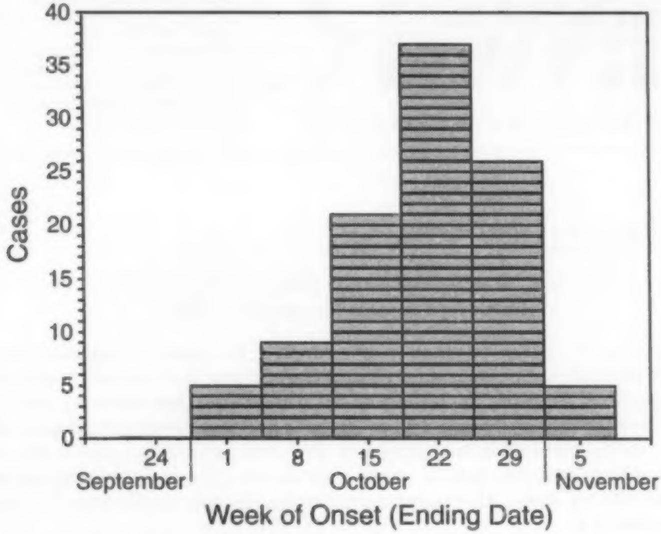
U.S. military personnel who developed a febrile illness with no apparent underlying cause and reported to a military outpatient clinic were referred to the U.S. Army's 28th Combat Support Hospital in Port-au-Prince for admission and evaluation, including serial blood smears for malaria, blood specimens for virus isolation, and serologic studies. Because dengue virus is the principal flavivirus known to be endemic in Haiti, a probable case of DF was defined as detection of antiflavivirus immunoglobulin M (IgM) antibodies. A confirmed case was defined as isolation of dengue virus.

During September 19–November 4, a total of 106 military personnel who had febrile illnesses were evaluated. Onset of illness began as early as 7 days after deployment, and the weekly number of cases peaked during the week ending October 22 (Figure 1). Of the 106 patients, 24 had an illness compatible with DF (i.e., fever, headache, myalgia and/or arthralgia, with or without rash). Dengue-like illnesses occurred in personnel stationed in both urban and rural areas of Haiti. One patient with probable DF had hemorrhage from a duodenal ulcer. Another had onset of fever, myalgias, and thrombocytopenia after returning to the United States.

As of November 10, preliminary laboratory results were available for 48 febrile patients. Of these, antiflavivirus IgM was detected in 11 (23%), and dengue virus was isolated from three additional patients (dengue type 1 [one patient] and dengue type 2 [two patients]). Confirmatory testing of specimens from these patients and other febrile personnel is ongoing. Repeated malaria smears were negative for all patients.

*Dengue — Continued*

**FIGURE 1. Cases of febrile illness* among U.S. military personnel, by week of onset — Haiti, September 18–November 5, 1994**




*Excludes three cases for which dates of onset were unknown.

The detection of DF cases among U.S. troops in Haiti prompted the following interventions: 1) use of personal protective measures against biting insects (e.g., DEET-containing repellant and bed nets) was reemphasized among unit commanders; 2) routine ultralow volume spraying of troop areas with insecticide (i.e., malathion) was implemented; and 3) common larval habitats of *Aedes aegypti* mosquitoes (e.g., discarded automobile tires) were identified and eliminated where possible.

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**Editorial Note:** Dengue virus infection is increasing throughout the Caribbean (*1*). Although recent surveillance data from Haiti are not available, the documentation of illness and infections among U.S. military personnel confirms the continuing occurrence of DF in Haiti and the circulation of at least two dengue virus serotypes.

The incubation period for DF generally ranges from 2 to 7 days but may be as long as 14 days; therefore, illness may occur while U.S. military personnel are stationed in Haiti or after they return to the United States. Illness is characterized by abrupt onset

*Dengue — Continued*

of fever, chills, headache, eye pain, and lower back pain. Common associated symptoms include myalgia, arthralgia, nausea, vomiting, anorexia, malaise, and a blanching erythematous rash. The clinical course may be characterized by recrudescence of fever for 1–2 days after initial improvement. Laboratory findings include leukopenia and thrombocytopenia. However, a small proportion of patients may develop dengue hemorrhagic fever (DHF), which is characterized by fever, thrombocytopenia (platelet count $<100,000/mm^3$), and abnormal capillary permeability evidenced by hemoconcentration, hypoalbuminemia, or pleural or abdominal effusions; mild or severe hemorrhage can occur. DHF can result in circulatory instability or shock, and the risk for these complications may be increased among persons with secondary dengue virus infections.

Most dengue virus infections are self-limited and can be treated with bed rest, acetaminophen, and oral fluids. Some U.S. military personnel deployed to Haiti who also participated in Operation Restore Hope in Somalia during 1992–94 and acquired dengue infections during that operation (*3*) may be at increased risk for DHF.

Laboratory diagnosis of DF includes detection of serum IgM antibodies, which are usually absent in specimens collected while patients are febrile but can be present in specimens collected after fever has abated (*2*). Definitive proof of DF requires virus isolation from serum or a fourfold or greater rise in dengue-specific antibody titers between acute- and convalescent-phase samples. Virus can be isolated from serum obtained only while patients are febrile.

During November–December, approximately 9000 military personnel will be returning to the United States from Haiti. Nonmilitary U.S. residents also may be traveling to and from Haiti during this period. Because DF and malaria are endemic in Haiti, physicians and other health-care providers in the United States should consider these diseases in the differential diagnosis of febrile illnesses in any person who has recently been in Haiti or other tropical countries in the Americas (*4*).

The occurrence of DF among troops deployed to Haiti highlights the increasing impact of this disease in the Americas, the need for an effective vaccine, and the need for increased efforts to control *Ae. aegypti*, the mosquito vector of dengue virus. Dengue virus is now endemic in all Caribbean countries except Cuba and the Cayman Islands (*1*). The potential exists for introduction of dengue virus into the United States, and for secondary transmission in areas with vector mosquitoes, because of increased travel to and from regions of the Americas where dengue is endemic.

For assistance with diagnosis of dengue in persons returning from Haiti, specimens from military personnel should be sent through the state health department laboratories to the Walter Reed Army Institute of Research, Building 40, Room 2044, Attention: Major N. Kanesa-thasan, Washington, DC 20307; telephone (202) 576-2015. Specimens from civilians should be sent through state health department laboratories to CDC's Dengue Branch, Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, 2 Calle Casia, San Juan, PR 00921-3200; telephone (809) 766-5181. Specimens for virus isolation should be sent on dry ice; specimens sent only for serologic testing may be shipped on cold packs.

*References*

1. Gubler DJ, Trent DW. Emergence of epidemic dengue/dengue hemorrhagic fever as a public health problem in the Americas. Infectious Agents and Disease 1993;2:383–93.

*Dengue — Continued*

2. Innis BL, Nisalak A, Nimmannitya S, et al. An enzyme-linked immunosorbent assay to characterize dengue infections where dengue and Japanese encephalitis co-circulate. Am J Trop Med Hyg 1989;40:418–27.
3. Kanesa-thasan N, Iacono-Connors L, Magill A, et al. Dengue serotypes 2 and 3 in US forces in Somalia [Letter]. Lancet 1994;343:678.
4. Rigau-Pérez JG, Gubler DJ, Vorndam AV, Clark GG. Dengue surveillance—United States, 1986–1992. In: CDC Surveillance Summaries (July). MMWR 1994;43(no. SS-2):7–19.

*Current Trends*

## Update: Influenza Activity — United States, 1994–95 Season

In collaboration with the World Health Organization (WHO) international collaborating laboratories and state and local health departments in the United States, CDC conducts surveillance to monitor influenza activity and to determine the antigenic characteristics of circulating strains of influenza viruses. This report describes influenza viruses isolated from sporadic cases of influenza in the United States during July–September 1994 and summarizes influenza surveillance findings from October through mid-November 1994.

From July through September, influenza type A(H3N2) viruses were isolated from sporadic cases in California, Hawaii, Michigan, New York, and South Dakota; influenza type A(H1N1) was reported from Nevada and influenza type B from Texas. All of these isolates were characterized at CDC and are antigenically similar to the A/Shangdong/09/93-like (H3N2), A/Texas/36/91-like (H1N1), and B/Panama/45/90-like influenza virus strains included in the 1994–95 influenza vaccine.

From October 2, when WHO international collaborating laboratories in the United States began seasonal influenza virus surveillance, through November 19, two of 2693 specimens tested for respiratory viruses yielded influenza virus. Influenza type A was identified by antigen detection from nasopharyngeal swab specimens collected November 2 from a patient in New Mexico and November 3 from a patient in New York. Reports from state and territorial epidemiologists and from sentinel physicians have indicated low levels of influenza-like illness nationwide.

*Reported by: Participating state and territorial epidemiologists and state public health laboratory directors. World Health Organization collaborating laboratories. Sentinel Physicians Influenza Surveillance System of the American Academy of Family Physicians. WHO Collaborating Center for Surveillance, Epidemiology, and Control of Influenza, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.*

**Editorial Note:** Although the time of onset of influenza epidemics can vary substantially by year, the pattern from October through mid-November 1994 was typical for influenza activity in the United States. In some recent influenza seasons (e.g., 1991–92 and 1993–94) (*1,2*), influenza activity began earlier than usual; however, regional activity usually does not begin until December, and influenza activity usually peaks during January or February. Accordingly, the Advisory Committee on Immunization Practices recommends that the optimal time for organized vaccination campaigns for persons in high-risk groups is usually from mid-October through mid-November. Vaccine should be offered to high-risk persons up to and even after influenza activity is documented in a community (*3*); following vaccination, 1–2 weeks are required for the

*Influenza — Continued*

development of protective antibody titers. When influenza vaccine is administered after influenza type A outbreaks have begun in a community, the antiviral drugs amantadine and rimantadine can be administered to protect against influenza until vaccine-induced antibody has developed. These drugs are not effective against influenza type B. Updated recommendations for the use of these drugs will be published in *MMWR* during December 1994.

Worldwide virologic surveillance is conducted throughout the year to monitor antigenic changes in the circulating influenza virus strains. Through this system, antigenic changes in influenza virus strains have been detected sufficiently early to formulate influenza vaccines that frequently have contained strains similar to those that subsequently have circulated in the United States at epidemic levels. Although influenza activity is difficult to predict, it is expected that during the 1994–95 season in the United States, both type A and type B viruses will circulate.

Information about national influenza surveillance is updated weekly from October through May and is available through the CDC Voice Information System, telephone (404) 332-4555. Information about local influenza activity is available from county and state health departments.

*References*
1. CDC. Influenza—United States, 1989–90 and 1990–91 seasons. MMWR 1992;41(no. SS-3):35–46.
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3. ACIP. Prevention and control of influenza: part I, vaccines—recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1994;43(no. RR-9).

*Current Trends*

## Hypothermia-Related Deaths — North Carolina, November 1993–March 1994

For 1979–1991, North Carolina (1990 population: 6,628,637) ranked second in number and ninth in rate of deaths associated with hypothermia (clinically defined as an unintentional lowering of the body temperature to ≤95 F [≤35 C]) [*1*]). From November 1993 through March 1994, a total of 28 deaths attributed to hypothermia were reported to the Office of the Chief Medical Examiner in North Carolina. This report summarizes information about those deaths and describes specific findings for four deaths that reflect circumstances commonly associated with hypothermia.

**Summary of Findings**

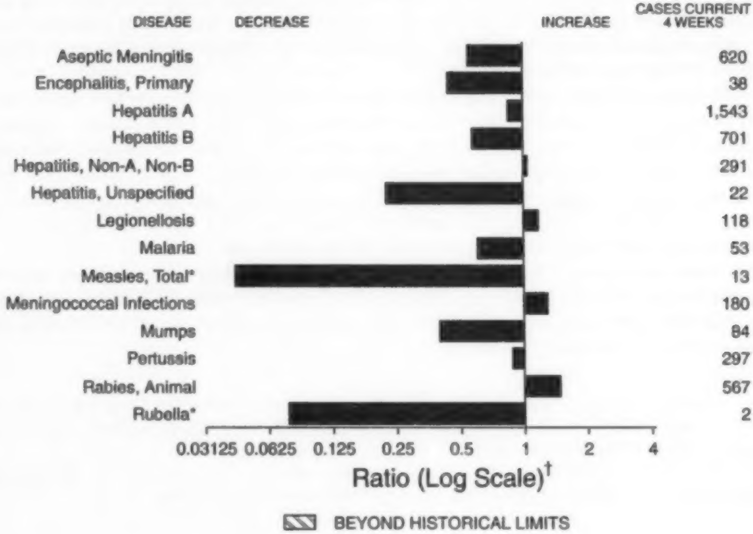
Of the 28 hypothermia-associated deaths in North Carolina during November 1993–March 1994, 16 (57%) occurred among men, three (11%) among persons who were homeless, and 13 (46%) among persons in whom alcohol abuse was mentioned on the pathology or police report. The median age of the decedents was 65.5 years (range: 32–91 years).

**Specific Findings for Four Deaths**

**Case 1.** On November 23, 1993, an 83-year-old woman with Alzheimer disease was found dead in a field. On November 20, dressed only in lightweight clothing, she had

*(Continued on page 855)*

**FIGURE I. Notifiable disease reports, comparison of 4-week totals ending November 19, 1994, with historical data — United States**




*The large apparent decreases in the number of reported cases of measles (total), and rubella reflect dramatic fluctuations in the historical baseline. (Ratio (log scale) for week 46 measles (total) and rubella are 0.04374 and 0.07673 respectively).

†Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending November 19, 1994 (46th Week)**

| | Cum. 1994 | | Cum. 1994 |
|---|---|---|---|
| AIDS* | 66,921 | Measles: imported | 172 |
| Anthrax | - | indigenous | 690 |
| Botulism: Foodborne | 48 | Plague | 14 |
| Infant | 71 | Poliomyelitis, Paralytic§ | 1 |
| Other | 7 | Psittacosis | 37 |
| Brucellosis | 79 | Rabies, human | 2 |
| Cholera | 30 | Syphilis, primary & secondary | 18,552 |
| Congenital rubella syndrome | 4 | Syphilis, congenital, age < 1 year¶ | 1,123 |
| Diphtheria | 1 | Tetanus | 33 |
| Encephalitis, post-infectious | 96 | Toxic shock syndrome | 161 |
| Gonorrhea | 347,697 | Trichinosis | 32 |
| *Haemophilus influenzae* (invasive disease)† | 1,006 | Tuberculosis | 19,458 |
| Hansen Disease | 108 | Tularemia | 79 |
| Leptospirosis | 32 | Typhoid fever | 380 |
| Lyme Disease | 10,090 | Typhus fever, tickborne (RMSF) | 412 |

*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update October 25, 1994.
†Of 959 cases of known age, 269 (28%) were reported among children less than 5 years of age.
§The remaining 5 suspected cases with onset in 1994 have not yet been confirmed. In 1993, 3 of 10 suspected cases were confirmed. Two of the confirmed cases of 1993 were vaccine-associated and one was classified as imported.
¶Total reported to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services, through second quarter 1994.

**TABLE II. Cases of selected notifiable diseases, United States, weeks ending November 19, 1994, and November 20, 1993 (46th Week)**

| Reporting Area | AIDS* | Aseptic Meningitis | Encephalitis | | Gonorrhea | | Hepatitis (Viral), by type | | | | Legionellosis | Lyme Disease |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Primary | Post-infectious | | | A | B | NA,NB | Unspecified | | |
| | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1993 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 |
| UNITED STATES | 66,921 | 7,161 | 589 | 98 | 347,697 | 353,756 | 20,076 | 10,155 | 3,801 | 372 | 1,408 | 10,090 |
| NEW ENGLAND | 2,451 | 274 | 18 | 4 | 7,497 | 6,873 | 258 | 270 | 117 | 15 | 74 | 2,427 |
| Maine | 71 | 30 | 5 | - | 83 | 72 | 24 | 11 | - | - | 5 | 26 |
| N.H. | 52 | 30 | - | 2 | 100 | 62 | 14 | 22 | 8 | - | - | 27 |
| Vt. | 29 | 35 | 2 | - | 32 | 22 | 10 | - | - | - | - | 13 |
| Mass. | 1,245 | 77 | 9 | 1 | 2,914 | 2,773 | 94 | 164 | 89 | 13 | 58 | 232 |
| R.I. | 225 | 102 | 2 | 1 | 416 | 375 | 24 | 8 | 20 | 2 | 11 | 455 |
| Conn. | 829 | - | - | - | 3,952 | 3,569 | 92 | 65 | - | - | - | 1,674 |
| MID. ATLANTIC | 19,665 | 825 | 51 | 17 | 38,725 | 41,261 | 1,481 | 1,304 | 398 | 8 | 235 | 6,307 |
| Upstate N.Y. | 1,801 | 398 | 30 | 3 | 9,285 | 8,864 | 484 | 353 | 196 | 4 | 57 | 3,923 |
| N.Y. City | 11,313 | 127 | 7 | 5 | 13,984 | 10,703 | 591 | 322 | 1 | - | 10 | 26 |
| N.J. | 4,424 | - | - | - | 4,527 | 5,121 | 248 | 322 | 170 | - | 38 | 1,193 |
| Pa. | 2,127 | 300 | 14 | 9 | 10,929 | 16,573 | 158 | 307 | 31 | 4 | 130 | 1,165 |
| E.N. CENTRAL | 5,255 | 1,360 | 147 | 22 | 66,679 | 75,433 | 2,008 | 981 | 274 | 10 | 415 | 121 |
| Ohio | 940 | 347 | 52 | 4 | 18,985 | 20,492 | 849 | 141 | 22 | - | 182 | 71 |
| Ind. | 534 | 180 | 11 | 1 | 8,079 | 7,674 | 342 | 169 | 10 | - | 103 | 14 |
| Ill. | 2,584 | 343 | 49 | 5 | 17,108 | 25,769 | 380 | 199 | 57 | 3 | 27 | 11 |
| Mich. | 895 | 483 | 31 | 12 | 16,276 | 15,578 | 280 | 351 | 182 | 7 | 74 | 25 |
| Wis. | 302 | 7 | 4 | - | 6,231 | 5,920 | 157 | 121 | 3 | - | 29 | - |
| W.N. CENTRAL | 1,387 | 399 | 30 | 8 | 19,817 | 19,514 | 1,040 | 577 | 88 | 11 | 89 | 230 |
| Minn. | 341 | 25 | 2 | - | 2,996 | 2,162 | 215 | 57 | 20 | 1 | 2 | 165 |
| Iowa | 91 | 111 | 1 | 1 | 1,379 | 1,431 | 57 | 24 | 12 | 10 | 30 | 15 |
| Mo. | 624 | 148 | 7 | 4 | 10,930 | 11,811 | 515 | 438 | 29 | - | 36 | 36 |
| N. Dak. | 22 | 12 | 4 | - | 18 | 49 | 5 | - | - | - | 4 | - |
| S. Dak. | 15 | 2 | 4 | - | 173 | 238 | 34 | 2 | - | - | 1 | - |
| Nebr. | 77 | 33 | 5 | 3 | 1,060 | 484 | 118 | 27 | 12 | - | 10 | 2 |
| Kans. | 217 | 68 | 7 | - | 3,261 | 3,339 | 96 | 29 | 15 | - | 6 | 12 |
| S. ATLANTIC | 15,911 | 1,378 | 136 | 29 | 97,179 | 88,475 | 1,292 | 2,082 | 579 | 48 | 321 | 753 |
| Del. | 230 | 34 | 1 | - | 1,767 | 1,357 | 17 | 5 | 1 | - | 26 | 70 |
| Md. | 2,455 | 227 | 20 | 4 | 15,743 | 14,284 | 186 | 376 | 30 | 16 | 85 | 315 |
| D.C. | 1,226 | 50 | - | 1 | 6,339 | 4,740 | 23 | 54 | 1 | - | 10 | 9 |
| Va. | 986 | 283 | 29 | 6 | 12,019 | 10,516 | 168 | 116 | 25 | 8 | 8 | 125 |
| W. Va. | 64 | 36 | 45 | 2 | 722 | 581 | 20 | 42 | 39 | - | 4 | 23 |
| N.C. | 1,027 | 206 | 40 | 1 | 25,143 | 22,380 | 120 | 257 | 52 | - | 25 | 76 |
| S.C. | 1,042 | 30 | - | - | 11,786 | 9,509 | 39 | 31 | 10 | - | 16 | 7 |
| Ga. | 1,905 | 47 | 1 | - | 2,424 | 4,660 | 28 | 527 | 180 | - | 99 | 103 |
| Fla. | 6,976 | 465 | - | 15 | 21,236 | 20,448 | 691 | 674 | 241 | 24 | 48 | 25 |
| E.S. CENTRAL | 1,761 | 478 | 35 | 3 | 41,689 | 40,697 | 569 | 1,079 | 834 | 2 | 70 | 40 |
| Ky. | 273 | 159 | 15 | 1 | 4,546 | 4,442 | 136 | 67 | 27 | - | 9 | 21 |
| Tenn. | 599 | 114 | 12 | - | 13,821 | 12,557 | 268 | 932 | 790 | 1 | 43 | 13 |
| Ala. | 518 | 155 | 6 | 1 | 13,347 | 14,486 | 98 | 80 | 17 | 1 | 13 | 6 |
| Miss. | 371 | 50 | 2 | 1 | 9,975 | 9,212 | 67 | - | - | - | 5 | - |
| W.S. CENTRAL | 6,509 | 775 | 47 | 2 | 41,893 | 40,265 | 2,909 | 1,343 | 541 | 69 | 40 | 120 |
| Ark. | 226 | 47 | - | - | 5,916 | 6,729 | 178 | 24 | 7 | 2 | 9 | 8 |
| La. | 1,032 | 32 | 7 | - | 10,745 | 10,536 | 138 | 153 | 162 | 1 | 13 | 2 |
| Okla. | 234 | - | - | - | 3,259 | 4,151 | 337 | 291 | 309 | 3 | 11 | 70 |
| Tex. | 5,017 | 696 | 40 | 2 | 21,973 | 18,849 | 2,256 | 875 | 63 | 63 | 7 | 40 |
| MOUNTAIN | 1,980 | 310 | 12 | 4 | 8,402 | 10,163 | 3,817 | 556 | 397 | 58 | 89 | 19 |
| Mont. | 23 | 8 | - | - | 76 | 70 | 23 | 22 | 13 | - | 16 | - |
| Idaho | 50 | 6 | - | - | 77 | 159 | 324 | 69 | 67 | 1 | 2 | 3 |
| Wyo. | 16 | 4 | 2 | 2 | 76 | 74 | 28 | 23 | 157 | - | 6 | 5 |
| Colo. | 723 | 118 | 3 | - | 2,809 | 3,368 | 527 | 89 | 60 | 15 | 19 | - |
| N. Mex. | 190 | 18 | - | - | 967 | 862 | 1,017 | 184 | 46 | 11 | 3 | 8 |
| Ariz. | 526 | 66 | 1 | 1 | 2,866 | 3,568 | 1,152 | 48 | 13 | 11 | 15 | - |
| Utah | 122 | 49 | 2 | 1 | 231 | 393 | 531 | 70 | 26 | 6 | 7 | 2 |
| Nev. | 330 | 41 | 4 | - | 1,300 | 1,669 | 215 | 51 | 15 | 14 | 21 | 1 |
| PACIFIC | 12,002 | 1,362 | 113 | 9 | 25,816 | 31,075 | 6,702 | 1,963 | 573 | 151 | 75 | 73 |
| Wash. | 820 | - | - | - | 2,591 | 3,285 | 315 | 66 | 66 | 2 | 8 | - |
| Oreg. | 512 | - | - | - | 570 | 1,059 | 687 | 78 | 17 | 1 | - | - |
| Calif. | 10,475 | 1,216 | 110 | 8 | 21,324 | 25,618 | 5,448 | 1,781 | 485 | 145 | 63 | 73 |
| Alaska | 36 | 18 | 3 | - | 786 | 559 | 192 | 11 | - | - | - | - |
| Hawaii | 159 | 128 | - | 1 | 545 | 554 | 60 | 27 | 5 | 3 | 4 | - |
| Guam | 1 | 19 | - | - | 190 | 87 | 42 | 6 | 1 | 12 | 3 | - |
| P.R. | 1,929 | 32 | 1 | 3 | 411 | 450 | 77 | 339 | 161 | 11 | - | - |
| V.I. | 44 | - | - | - | 38 | 90 | - | 1 | - | - | - | - |
| Amer. Samoa | - | - | - | - | 31 | 40 | 7 | - | - | - | - | - |
| C.N.M.I. | - | - | - | - | 45 | 76 | 7 | 1 | - | - | - | - |

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update October 25, 1994.

## TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 19, 1994, and November 20, 1993 (46th Week)

| Reporting Area | Malaria | Measles (Rubeola) | | | | | Meningococcal Infections | Mumps | | Pertussis | | | Rubella | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Indigenous | | Imported* | | Total | | | | | | | | | |
| | Cum. 1994 | 1994 | Cum. 1994 | 1994 | Cum. 1994 | Cum. 1993 | Cum. 1994 | 1994 | Cum. 1994 | 1994 | Cum. 1994 | Cum. 1993 | 1994 | Cum. 1994 | Cum. 1993 |
| UNITED STATES | 933 | 1 | 690 | - | 172 | 297 | 2,331 | 28 | 1,243 | 94 | 3,115 | 5,610 | - | 212 | 174 |
| NEW ENGLAND | 76 | - | 14 | - | 14 | 63 | 118 | - | 19 | 20 | 349 | 682 | - | 128 | 2 |
| Maine | 6 | - | 1 | - | 4 | 1 | 19 | - | 3 | - | 18 | 15 | - | - | 1 |
| N.H. | 3 | - | 1 | - | - | 2 | 6 | - | 4 | 9 | 67 | 149 | - | - | - |
| Vt. | 3 | - | 2 | - | 1 | 31 | 3 | - | - | - | 40 | 91 | - | - | - |
| Mass. | 33 | - | 2 | - | 6 | 18 | 52 | - | 3 | 11 | 184 | 343 | - | 124 | 1 |
| R.I. | 9 | - | 4 | - | 3 | 2 | - | - | 2 | - | 6 | 11 | - | 2 | - |
| Conn. | 22 | - | 4 | - | - | 9 | 38 | - | 7 | - | 34 | 73 | - | 2 | - |
| MID. ATLANTIC | 187 | 1 | 173 | - | 22 | 33 | 235 | 4 | 103 | 20 | 578 | 872 | - | 10 | 59 |
| Upstate N.Y. | 49 | - | 13 | - | 3 | 7 | 83 | - | 31 | 2 | 218 | 304 | - | 7 | 17 |
| N.Y. City | 64 | - | 11 | - | 3 | 17 | 11 | - | 13 | 7 | 157 | 78 | - | 1 | 22 |
| N.J. | 46 | - | 144 | - | 12 | 9 | 53 | - | 6 | - | 11 | 80 | - | 2 | 15 |
| Pa. | 28 | 1 | 5 | - | 4 | - | 88 | 4 | 53 | 11 | 192 | 410 | - | - | 5 |
| E.N. CENTRAL | 96 | - | 58 | - | 44 | 31 | 371 | 2 | 214 | 4 | 380 | 1,408 | - | 11 | 8 |
| Ohio | 15 | - | 15 | - | 2 | 9 | 106 | 2 | 66 | 2 | 145 | 407 | - | - | 1 |
| Ind. | 14 | - | - | - | 1 | 1 | 68 | - | 7 | 2 | 58 | 140 | - | - | 3 |
| Ill. | 39 | - | 17 | - | 39 | 9 | 110 | - | 95 | - | 81 | 406 | - | 3 | 1 |
| Mich. | 26 | - | 23 | - | 2 | 6 | 53 | - | 42 | - | 46 | 107 | - | 8 | 2 |
| Wis. | 2 | - | 3 | - | - | 6 | 34 | - | 4 | - | 50 | 348 | - | - | 1 |
| W.N. CENTRAL | 43 | - | 126 | - | 44 | 3 | 169 | - | 63 | 5 | 195 | 524 | - | 2 | 1 |
| Minn. | 14 | - | - | - | - | - | 18 | - | 5 | 2 | 87 | 306 | - | - | - |
| Iowa | 5 | - | 6 | - | 1 | - | 18 | - | 16 | - | 19 | 37 | - | - | - |
| Mo. | 12 | - | 118 | - | 42 | 1 | 86 | - | 38 | 1 | 43 | 136 | - | 2 | 1 |
| N. Dak. | 1 | - | - | - | - | - | 1 | - | 5 | - | 4 | 5 | - | - | - |
| S. Dak. | - | - | - | - | - | - | 9 | - | - | 1 | 20 | 3 | - | - | - |
| Nebr. | 5 | - | 1 | - | 1 | - | 13 | - | 1 | - | 9 | 13 | - | - | - |
| Kans. | 6 | - | 1 | - | - | 2 | 24 | - | - | 1 | 13 | 19 | - | - | - |
| S. ATLANTIC | 209 | - | 59 | - | 8 | 28 | 400 | 10 | 184 | 2 | 287 | 567 | - | 11 | 6 |
| Del. | 3 | - | - | - | - | - | 5 | - | - | - | 3 | 9 | - | - | - |
| Md. | 99 | - | 2 | - | 2 | 4 | 40 | 4 | 62 | - | 74 | 123 | - | - | 2 |
| D.C. | 14 | - | - | - | - | - | 6 | - | - | - | 8 | 13 | - | - | - |
| Va. | 32 | - | 1 | - | 2 | 4 | 64 | 2 | 41 | - | 36 | 59 | - | - | - |
| W. Va. | - | - | 36 | - | - | - | 12 | - | 3 | - | 4 | 8 | - | - | - |
| N.C. | 11 | - | 2 | - | 1 | - | 48 | - | 36 | - | 79 | 151 | - | - | - |
| S.C. | 5 | - | - | - | - | - | 28 | - | 7 | - | 13 | 70 | - | - | - |
| Ga. | 23 | - | 3 | - | - | - | 69 | - | 8 | 1 | 26 | 51 | - | 2 | - |
| Fla. | 22 | - | 15 | - | 3 | 20 | 128 | 4 | 27 | 1 | 44 | 83 | - | 9 | 4 |
| E.S. CENTRAL | 31 | - | 28 | - | - | 1 | 138 | 5 | 26 | 1 | 122 | 271 | - | - | 1 |
| Ky. | 11 | - | - | - | - | - | 35 | - | - | - | 59 | 36 | - | - | 1 |
| Tenn. | 10 | - | 28 | - | - | - | 35 | - | 9 | - | 22 | 166 | - | - | - |
| Ala. | 9 | - | - | - | - | 1 | 68 | 5 | 10 | 1 | 34 | 59 | - | - | - |
| Miss. | 1 | - | - | - | - | - | - | - | 7 | - | 7 | 10 | - | - | - |
| W.S. CENTRAL | 42 | - | 11 | - | 8 | 10 | 294 | 3 | 232 | - | 184 | 143 | - | 13 | 17 |
| Ark. | 3 | - | - | - | 1 | - | 40 | - | 1 | - | 27 | 11 | - | - | - |
| La. | 9 | - | - | - | 1 | 1 | 37 | 1 | 28 | - | 10 | 12 | - | - | 1 |
| Okla. | 7 | - | - | - | - | - | 32 | - | 23 | - | 26 | 78 | - | 4 | 1 |
| Tex. | 23 | - | 11 | - | 6 | 9 | 185 | 2 | 180 | - | 121 | 42 | - | 9 | 15 |
| MOUNTAIN | 30 | - | 149 | - | 17 | 6 | 151 | 1 | 147 | 31 | 390 | 402 | - | 6 | 11 |
| Mont. | - | - | - | - | - | - | 6 | - | - | 1 | 9 | 11 | - | - | - |
| Idaho | 2 | - | 1 | - | - | - | 17 | 1 | 10 | 28 | 77 | 95 | - | - | 2 |
| Wyo. | 1 | - | - | - | - | - | 7 | - | 2 | - | - | 1 | - | - | - |
| Colo. | 13 | - | 16 | - | 3 | 3 | 31 | - | 3 | - | 123 | 105 | - | - | 2 |
| N. Mex. | 3 | - | - | - | - | - | 15 | N | N | 1 | 24 | 39 | - | 1 | - |
| Ariz. | 5 | - | 1 | - | 1 | 2 | 47 | - | 90 | 1 | 130 | 51 | - | - | 2 |
| Utah | 4 | - | 131 | - | 2 | - | 18 | - | 24 | - | 24 | 38 | - | 4 | 4 |
| Nev. | 2 | - | - | - | 11 | 1 | 10 | - | 17 | - | 3 | 4 | - | 1 | 1 |
| PACIFIC | 219 | - | 72 | - | 15 | 122 | 455 | 3 | 255 | 11 | 630 | 741 | - | 31 | 69 |
| Wash. | 12 | - | - | - | - | - | 30 | - | 7 | - | 32 | 68 | - | - | - |
| Oreg. | 13 | - | - | - | 2 | 4 | 87 | N | N | - | 38 | 90 | - | 2 | - |
| Calif. | 176 | - | 56 | - | 9 | 96 | 329 | 2 | 226 | 10 | 537 | 572 | - | 24 | 40 |
| Alaska | 2 | - | 16 | - | - | 2 | 2 | - | 4 | - | 1 | 5 | - | 1 | 1 |
| Hawaii | 16 | - | - | - | 4 | 20 | 7 | 1 | 18 | 1 | 22 | 6 | - | 4 | 28 |
| Guam | 4 | U | 211 | U | - | 3 | 1 | U | 6 | U | 2 | - | U | 1 | - |
| P.R. | 3 | - | 13 | - | - | 354 | 15 | - | 2 | - | 1 | 8 | - | - | - |
| V.I. | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Amer. Samoa | - | U | - | U | - | - | - | U | 1 | U | 2 | 2 | U | - | - |
| C.N.M.I. | 1 | U | 26 | U | - | 17 | - | U | 2 | U | - | 1 | U | - | - |

*For measles only, imported cases include both out-of-state and international importations.

N: Not notifiable U: Unavailable † International § Out-of-state

## TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 19, 1994, and November 20, 1993 (46th Week)

| Reporting Area | Syphilis (Primary & Secondary) | | Toxic-Shock Syndrome | Tuberculosis | | Tula-remia | Typhoid Fever | Typhus Fever (Tick-borne) (RMSF) | Rabies, Animal |
|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1994 | Cum. 1993 | Cum. 1994 | Cum. 1994 | Cum. 1993 | Cum. 1994 | Cum. 1994 | Cum. 1994 | Cum. 1994 |
| UNITED STATES | 18,552 | 23,509 | 161 | 19,458 | 19,999 | 79 | 380 | 412 | 6,675 |
| NEW ENGLAND | 195 | 330 | 4 | 443 | 458 | 1 | 21 | 15 | 1,710 |
| Maine | 4 | 7 | 1 | 27 | 25 | - | - | - | - |
| N.H. | 4 | 25 | - | 15 | 17 | - | - | - | 188 |
| Vt. | - | 1 | 1 | 8 | 5 | - | - | - | 128 |
| Mass. | 83 | 115 | 2 | 228 | 246 | 1 | 17 | 7 | 667 |
| R.I. | 13 | 14 | - | 43 | 52 | - | 1 | - | 44 |
| Conn. | 91 | 168 | - | 124 | 113 | - | 3 | 8 | 683 |
| MID. ATLANTIC | 1,208 | 2,124 | 27 | 3,879 | 4,252 | 1 | 102 | 17 | 1,726 |
| Upstate N.Y. | 152 | 209 | 14 | 454 | 609 | 1 | 12 | 6 | 1,253 |
| N.Y. City | 522 | 1,044 | - | 2,264 | 2,387 | - | 67 | 1 | - |
| N.J. | 215 | 288 | - | 695 | 687 | - | 17 | 4 | 248 |
| Pa. | 319 | 583 | 13 | 466 | 569 | - | 6 | 6 | 225 |
| E.N. CENTRAL | 2,485 | 3,769 | 31 | 1,877 | 2,060 | 8 | 71 | 45 | 55 |
| Ohio | 999 | 1,018 | 6 | 295 | 277 | 1 | 7 | 28 | 4 |
| Ind. | 230 | 333 | 2 | 174 | 202 | 2 | 7 | 5 | 13 |
| Ill. | 712 | 1,444 | 11 | 961 | 1,083 | 3 | 44 | 10 | 18 |
| Mich. | 258 | 515 | 12 | 396 | 415 | 1 | 6 | 2 | 12 |
| Wis. | 286 | 459 | - | 51 | 83 | 1 | 7 | - | 8 |
| W.N. CENTRAL | 1,037 | 1,480 | 24 | 509 | 443 | 36 | 1 | 36 | 188 |
| Minn. | 46 | 55 | 1 | 121 | 62 | 1 | - | - | 14 |
| Iowa | 59 | 61 | 8 | 54 | 52 | - | - | 1 | 77 |
| Mo. | 868 | 1,238 | 6 | 223 | 222 | 23 | 1 | 18 | 21 |
| N. Dak. | - | 4 | 1 | 8 | 7 | 1 | - | - | 10 |
| S. Dak. | 1 | 2 | - | 22 | 12 | 2 | - | 13 | 33 |
| Nebr. | 11 | 10 | 3 | 17 | 21 | 2 | - | 1 | - |
| Kans. | 52 | 110 | 5 | 64 | 67 | 7 | - | 3 | 33 |
| S. ATLANTIC | 5,374 | 5,875 | 8 | 3,639 | 4,023 | 2 | 46 | 195 | 1,791 |
| Del. | 25 | 90 | - | 40 | 42 | - | 1 | - | 41 |
| Md. | 275 | 333 | - | 301 | 342 | 1 | 13 | 22 | 481 |
| D.C. | 192 | 300 | - | 104 | 146 | - | 1 | - | 2 |
| Va. | 721 | 567 | 1 | 292 | 396 | - | 8 | 19 | 381 |
| W. Va. | 9 | 12 | - | 70 | 68 | - | - | 2 | 70 |
| N.C. | 1,484 | 1,694 | 1 | 443 | 483 | - | - | 76 | 155 |
| S.C. | 726 | 847 | - | 331 | 345 | - | - | 18 | 163 |
| Ga. | 1,259 | 981 | 1 | 664 | 677 | 1 | 2 | 55 | 339 |
| Fla. | 683 | 1,051 | 5 | 1,394 | 1,524 | - | 21 | 3 | 159 |
| E.S. CENTRAL | 3,489 | 3,651 | 6 | 1,279 | 1,450 | 1 | 3 | 43 | 204 |
| Ky. | 195 | 314 | 2 | 280 | 333 | 1 | 1 | 9 | 20 |
| Tenn. | 939 | 1,039 | 3 | 401 | 451 | - | 2 | 28 | 71 |
| Ala. | 575 | 761 | 1 | 392 | 442 | - | - | 2 | 113 |
| Miss. | 1,780 | 1,537 | - | 206 | 224 | - | - | 4 | - |
| W.S. CENTRAL | 3,939 | 4,970 | 1 | 2,611 | 2,325 | 17 | 15 | 47 | 613 |
| Ark. | 431 | 509 | - | 237 | 158 | 16 | - | 8 | 25 |
| La. | 1,533 | 2,294 | - | 138 | 234 | - | 3 | - | 63 |
| Okla. | 111 | 256 | 1 | 225 | 149 | 1 | 3 | 32 | 39 |
| Tex. | 1,864 | 1,911 | - | 2,011 | 1,784 | - | 9 | 7 | 486 |
| MOUNTAIN | 206 | 221 | 8 | 439 | 492 | 9 | 10 | 14 | 131 |
| Mont. | 4 | 1 | - | 9 | 13 | 3 | - | 4 | 20 |
| Idaho | 1 | - | 2 | 11 | 12 | - | - | - | 3 |
| Wyo. | 1 | 8 | - | 8 | 6 | - | - | 2 | 19 |
| Colo. | 110 | 71 | 4 | 21 | 72 | 1 | 3 | 4 | 15 |
| N. Mex. | 19 | 24 | - | 54 | 59 | 1 | 1 | 2 | 7 |
| Ariz. | 35 | 92 | - | 202 | 212 | - | 2 | 1 | 45 |
| Utah | 8 | 10 | 2 | 41 | 30 | 2 | 2 | - | 13 |
| Nev. | 28 | 15 | - | 93 | 88 | 2 | 2 | 1 | 9 |
| PACIFIC | 619 | 1,089 | 52 | 4,782 | 4,496 | 4 | 111 | - | 257 |
| Wash. | 30 | 55 | 3 | 231 | 234 | - | 4 | - | - |
| Oreg. | 21 | 37 | - | 90 | - | 2 | 5 | - | 12 |
| Calif. | 561 | 983 | 45 | 4,178 | 3,982 | 1 | 96 | - | 215 |
| Alaska | 4 | 8 | - | 59 | 53 | 1 | - | - | 30 |
| Hawaii | 3 | 6 | 4 | 224 | 227 | - | 6 | - | - |
| Guam | 10 | 3 | - | 153 | 65 | - | 1 | - | - |
| P.R. | 269 | 454 | - | 159 | 165 | - | - | - | 59 |
| V.I. | 27 | 39 | - | - | 2 | - | - | - | - |
| Amer. Samoa | 1 | - | - | 4 | 4 | - | 1 | - | - |
| C.N.M.I. | 2 | 7 | - | 33 | 38 | - | 1 | - | - |

U: Unavailable

## TABLE III. Deaths in 121 U.S. cities,* week ending November 19, 1994 (46th Week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I† Total |
|---|---|---|---|---|---|---|---|
| | All Ages | ≥65 | 45-64 | 25-44 | 1-24 | <1 | |
| NEW ENGLAND | 673 | 452 | 137 | 54 | 12 | 18 | 45 |
| Boston, Mass. | 165 | 95 | 37 | 22 | 2 | 9 | 10 |
| Bridgeport, Conn. | 39 | 26 | 7 | 6 | - | - | 3 |
| Cambridge, Mass. | 20 | 12 | 6 | 2 | - | - | 2 |
| Fall River, Mass. | 32 | 27 | 4 | 1 | - | - | 1 |
| Hartford, Conn. | 72 | 42 | 20 | 5 | 2 | 3 | - |
| Lowell, Mass. | 25 | 20 | 3 | 1 | 1 | - | 2 |
| Lynn, Mass. | 9 | 8 | 1 | - | - | - | - |
| New Bedford, Mass. | 35 | 23 | 8 | 4 | - | - | 1 |
| New Haven, Conn. | 52 | 34 | 9 | 5 | 1 | 3 | 2 |
| Providence, R.I. | 55 | 38 | 10 | 4 | 3 | - | 8 |
| Somerville, Mass. | 9 | 3 | 5 | 1 | - | - | - |
| Springfield, Mass. | 56 | 39 | 13 | - | 3 | 1 | 5 |
| Waterbury, Conn. | 29 | 26 | 3 | - | - | - | 2 |
| Worcester, Mass. | 75 | 59 | 11 | 3 | - | 2 | 9 |
| MID. ATLANTIC | 2,505 | 1,629 | 455 | 312 | 59 | 49 | 147 |
| Albany, N.Y. | 40 | 31 | 6 | 2 | 1 | - | 6 |
| Allentown, Pa. | 25 | 19 | 3 | 3 | - | - | 1 |
| Buffalo, N.Y. | 68 | 51 | 13 | 3 | 1 | - | 28 |
| Camden, N.J. | 32 | 21 | 4 | 4 | 1 | 2 | 3 |
| Elizabeth, N.J. | 28 | 18 | 6 | 3 | 1 | - | - |
| Erie, Pa.§ | 46 | 36 | 7 | 2 | - | 1 | - |
| Jersey City, N.J. | 47 | 29 | 10 | 4 | 2 | 2 | - |
| New York City, N.Y. | 1,342 | 827 | 266 | 210 | 24 | 15 | 43 |
| Newark, N.J. | 86 | 46 | 12 | 20 | 5 | 3 | 7 |
| Paterson, N.J. | 31 | 21 | 3 | 4 | 1 | 2 | 2 |
| Philadelphia, Pa. | 297 | 186 | 53 | 33 | 16 | 9 | 20 |
| Pittsburgh, Pa.§ | 111 | 77 | 20 | 2 | 3 | 8 | 6 |
| Reading, Pa. | 17 | 11 | 3 | 1 | 1 | 1 | 2 |
| Rochester, N.Y. | 125 | 101 | 19 | 4 | 1 | - | 14 |
| Schenectady, N.Y. | 21 | 16 | 5 | - | - | - | 2 |
| Scranton, Pa.§ | 31 | 27 | 4 | - | - | - | 2 |
| Syracuse, N.Y. | 96 | 72 | 13 | 7 | - | 4 | 9 |
| Trenton, N.J. | 21 | 13 | 2 | 4 | - | 2 | 1 |
| Utica, N.Y. | 12 | 9 | 1 | 2 | - | - | - |
| Yonkers, N.Y. | 29 | 18 | 5 | 4 | 2 | - | 1 |
| E.N. CENTRAL | 2,322 | 1,445 | 448 | 245 | 117 | 67 | 122 |
| Akron, Ohio | 60 | 40 | 17 | 1 | 2 | - | - |
| Canton, Ohio | 36 | 27 | 8 | - | - | 1 | 7 |
| Chicago, Ill. | 438 | 171 | 82 | 98 | 66 | 21 | 15 |
| Cincinnati, Ohio | 93 | 65 | 18 | 5 | 1 | 4 | 9 |
| Cleveland, Ohio | 170 | 111 | 31 | 21 | 4 | 3 | 1 |
| Columbus, Ohio | 197 | 130 | 40 | 18 | 6 | 3 | 14 |
| Dayton, Ohio | 130 | 94 | 23 | 11 | 1 | 1 | 8 |
| Detroit, Mich. | 274 | 150 | 68 | 37 | 9 | 10 | 9 |
| Evansville, Ind. | 43 | 36 | 6 | 1 | - | - | - |
| Fort Wayne, Ind. | 56 | 41 | 13 | 1 | 1 | - | 4 |
| Gary, Ind. | 21 | 13 | 5 | 2 | 1 | - | 1 |
| Grand Rapids, Mich. | 60 | 47 | 6 | 1 | 2 | 4 | 5 |
| Indianapolis, Ind. | 193 | 132 | 27 | 24 | 6 | 4 | 12 |
| Madison, Wis. | 58 | 40 | 11 | 5 | 1 | 1 | 6 |
| Milwaukee, Wis. | 137 | 91 | 30 | 5 | 2 | 9 | 12 |
| Peoria, Ill. | 46 | 30 | 8 | 2 | 5 | 1 | 2 |
| Rockford, Ill. | 58 | 39 | 11 | 3 | 4 | 1 | 6 |
| South Bend, Ind. | 54 | 42 | 9 | 3 | - | - | - |
| Toledo, Ohio | 125 | 91 | 20 | 6 | 6 | 2 | 9 |
| Youngstown, Ohio | 73 | 55 | 15 | 1 | - | 2 | 2 |
| W.N. CENTRAL | 744 | 518 | 129 | 46 | 19 | 21 | 25 |
| Des Moines, Iowa | U | U | U | U | U | U | U |
| Duluth, Minn. | 19 | 14 | 4 | 1 | - | - | 1 |
| Kansas City, Kans. | 32 | 24 | 6 | 2 | - | - | - |
| Kansas City, Mo. | 102 | 67 | 10 | 8 | 4 | 2 | 4 |
| Lincoln, Nebr. | 46 | 34 | 7 | 5 | - | - | 1 |
| Minneapolis, Minn. | 195 | 138 | 37 | 11 | 4 | 5 | 8 |
| Omaha, Nebr. | 83 | 61 | 16 | 2 | 1 | 3 | 6 |
| St. Louis, Mo. | 149 | 100 | 27 | 9 | 8 | 5 | - |
| St. Paul, Minn. | 66 | 44 | 11 | 5 | 1 | 5 | 3 |
| Wichita, Kans. | 52 | 36 | 11 | 3 | 1 | 1 | 2 |
| S. ATLANTIC | 1,305 | 834 | 229 | 161 | 43 | 38 | 54 |
| Atlanta, Ga. | 164 | 108 | 32 | 19 | 2 | 3 | 7 |
| Baltimore, Md. | 181 | 90 | 46 | 33 | 5 | 7 | 15 |
| Charlotte, N.C. | 121 | 74 | 19 | 15 | 8 | 5 | 7 |
| Jacksonville, Fla. | 148 | 110 | 20 | 14 | 2 | 2 | 5 |
| Miami, Fla. | 86 | 55 | 15 | 13 | - | 3 | - |
| Norfolk, Va. | 55 | 37 | 6 | 6 | 3 | 3 | - |
| Richmond, Va. | U | U | U | U | U | U | U |
| Savannah, Ga. | 49 | 33 | 7 | 4 | 2 | 3 | 3 |
| St. Petersburg, Fla. | 57 | 44 | 3 | 5 | 2 | 3 | 3 |
| Tampa, Fla. | 186 | 138 | 30 | 8 | 6 | 4 | 11 |
| Washington, D.C. | 241 | 130 | 50 | 43 | 13 | 5 | 3 |
| Wilmington, Del. | 17 | 15 | 1 | 1 | - | - | - |
| E.S. CENTRAL | 732 | 471 | 154 | 51 | 33 | 23 | 44 |
| Birmingham, Ala. | 103 | 72 | 14 | 7 | 3 | 7 | 3 |
| Chattanooga, Tenn. | 56 | 36 | 12 | 4 | 3 | 1 | 1 |
| Knoxville, Tenn. | 65 | 41 | 17 | 5 | 1 | 1 | 9 |
| Lexington, Ky. | 69 | 48 | 13 | 3 | 4 | 1 | 4 |
| Memphis, Tenn. | 179 | 113 | 37 | 14 | 10 | 5 | 10 |
| Mobile, Ala. | 76 | 45 | 21 | 3 | 6 | 1 | 2 |
| Montgomery, Ala. | 39 | 25 | 5 | 4 | 3 | 2 | 6 |
| Nashville, Tenn. | 145 | 91 | 35 | 11 | 3 | 5 | 9 |
| W.S. CENTRAL | 1,564 | 988 | 298 | 189 | 53 | 36 | 102 |
| Austin, Tex. | 89 | 54 | 18 | 13 | 4 | - | 7 |
| Baton Rouge, La. | 61 | 41 | 11 | 6 | 2 | 1 | - |
| Corpus Christi, Tex. | 46 | 28 | 7 | 7 | 2 | 2 | 1 |
| Dallas, Tex. | 170 | 98 | 30 | 29 | 10 | 3 | 2 |
| El Paso, Tex. | 59 | 38 | 10 | 8 | - | 3 | 2 |
| Ft. Worth, Tex. | 93 | 71 | 12 | 4 | 3 | 3 | 1 |
| Houston, Tex. | 440 | 243 | 98 | 69 | 19 | 11 | 41 |
| Little Rock, Ark. | 86 | 55 | 19 | 7 | 3 | 2 | 8 |
| New Orleans, La. | 133 | 96 | 21 | 9 | 3 | 4 | - |
| San Antonio, Tex. | 242 | 163 | 48 | 21 | 5 | 5 | 24 |
| Shreveport, La. | 34 | 25 | 6 | 2 | 1 | - | 4 |
| Tulsa, Okla. | 111 | 76 | 18 | 14 | 1 | 2 | 12 |
| MOUNTAIN | 945 | 645 | 181 | 84 | 17 | 18 | 82 |
| Albuquerque, N.M. | 109 | 71 | 21 | 14 | 2 | 1 | 4 |
| Colo. Springs, Colo. | 46 | 34 | 7 | 4 | 1 | - | 2 |
| Denver, Colo. | 148 | 96 | 29 | 18 | - | 5 | 22 |
| Las Vegas, Nev. | 158 | 102 | 40 | 12 | 3 | 1 | 12 |
| Ogden, Utah | 17 | 12 | 4 | - | 1 | - | 1 |
| Phoenix, Ariz. | 211 | 141 | 43 | 16 | 4 | 7 | 23 |
| Pueblo, Colo. | 22 | 19 | 3 | - | - | - | - |
| Salt Lake City, Utah | 82 | 64 | 8 | 6 | 3 | 1 | 12 |
| Tucson, Ariz. | 152 | 106 | 26 | 14 | 3 | 3 | 6 |
| PACIFIC | 1,825 | 1,180 | 361 | 192 | 51 | 20 | 128 |
| Berkeley, Calif. | 12 | 11 | - | 1 | - | - | 1 |
| Fresno, Calif. | 106 | 73 | 22 | 6 | 4 | 1 | 8 |
| Glendale, Calif. | 24 | 19 | 5 | - | - | - | 1 |
| Honolulu, Hawaii | 88 | 58 | 19 | 10 | 1 | - | 6 |
| Long Beach, Calif. | 66 | 48 | 13 | 3 | 1 | 1 | 13 |
| Los Angeles, Calif. | 497 | 280 | 112 | 71 | 24 | - | 15 |
| Pasadena, Calif. | 34 | 18 | 5 | 4 | 4 | 3 | 4 |
| Portland, Oreg. | 138 | 101 | 22 | 10 | 2 | 3 | 4 |
| Sacramento, Calif. | U | U | U | U | U | U | U |
| San Diego, Calif. | 141 | 96 | 21 | 15 | 6 | 3 | 18 |
| San Francisco, Calif. | 149 | 86 | 30 | 21 | - | 1 | 18 |
| San Jose, Calif. | 210 | 142 | 45 | 16 | 2 | 5 | 21 |
| Santa Cruz, Calif. | 38 | 30 | 5 | 1 | - | - | 2 |
| Seattle, Wash. | 172 | 111 | 31 | 24 | 4 | 2 | 11 |
| Spokane, Wash. | 46 | 35 | 9 | 2 | - | - | - |
| Tacoma, Wash. | 106 | 72 | 22 | 8 | 3 | 1 | 6 |
| TOTAL | 12,615¶ | 8,162 | 2,392 | 1,334 | 404 | 290 | 749 |

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

U: Unavailable.

*Hypothermia-Related Deaths — Continued*

wandered away from a nearby nursing home. The average low temperature for the 3 days she was missing was 34 F (1.1 C). The autopsy report listed hypothermia as the cause of death.

**Case 2**. On December 12, 1993, a fully clothed 58-year-old man was found dead in a grassy area behind a store. He had a history of chronic alcohol abuse. At autopsy, his blood alcohol concentration (BAC) was 0.26 g/dL. The average temperature the day the decedent was found was 32 F (0 C). Death was attributed to a combination of hypothermia and ethanol intoxication (North Carolina state law defines legal intoxication as a BAC >0.08 g/dL). The decedent's only known residence was a shelter for the homeless.

**Case 3**. On January 22, 1994, a 32-year-old man was found unconscious in his vehicle, which had minimal damage from an apparent single-car collision on an ice-covered dirt road. When admitted to the hospital, his core body temperature was 92 F (33.3 C), and his BAC was 0.56 g/dL. He died 2 days later; death was attributed to aspiration pneumonia with hypothermia listed as a contributing cause. The low temperature the day he was found was 14 F (–10 C).

**Case 4**. On February 2, 1994, a 55-year-old man was found unclothed in his unheated home. When admitted to the hospital, his core body temperature was 80 F (26.7 C), and his BAC was 0.11 g/dL. He died within 24 hours; his death was attributed to complications resulting from hypothermia. The low temperature the day he was found was 26 F (–3.3 C).

*Reported by: JD Butts, MD, Office of the Chief Medical Examiner, Div of Postmortem Medicolegal Examination, North Carolina Dept of Environment, Health, and Natural Resources. Div of Environmental Hazards and Health Effects, National Center for Environmental Health, CDC.*

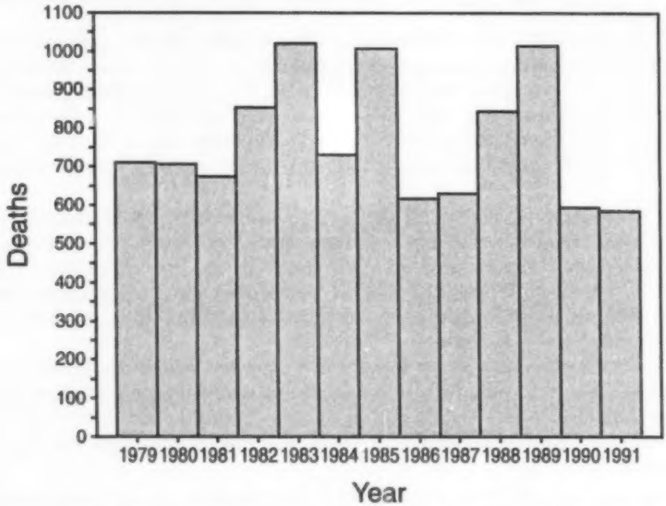
**Editorial Note**: From 1979 (the earliest year for which on-line data are available) through 1991, an annual average of 770 persons died from hypothermia* in the United States (range: 586 in 1991 to 1021 in 1983) (Figure 1); the age-adjusted annual death rate for hypothermia during this period was 0.2 deaths per million population. Most of these deaths occurred among males (67%) and whites (61%). Sex- and race-specific annual death rates were higher for black males than for white males (13.7 versus 3.2 deaths per million) and for black females than white females (4.1 versus 0.1 deaths per million). Approximately 50% of all hypothermia-related deaths occurred among persons aged >64 years. These differences in risks for hypothermia-associated death may reflect differences in socioeconomic status, nutritional status, condition of clothing, and access to adequate shelter. The risk for hypothermia is increased among the elderly in mildly cool environments (i.e., 65 F [18 C]) because of an impaired shivering mechanism, lower levels of protective fat, limited mobility, and lower metabolic rate (*2*).

From 1979 through 1991, the highest total number of deaths from hypothermia occurred in Illinois (633); the age-adjusted death rate was highest in Alaska (29 deaths per million). States in the highest quartiles for both number of deaths and hypothermia death rates included those characterized by severe winter weather (e.g., Illinois, New York, and Pennsylvania) as well as those having milder climates (e.g., North Carolina, South Carolina, and Virginia).

*Data obtained from the Compressed Mortality File maintained by CDC. Hypothermia was defined as the *International Classification of Diseases, Ninth Revision*, codes E901.0, E901.8, and E901.9 and excludes manmade cold (E901.1).

*Hypothermia-Related Deaths — Continued*

**FIGURE 1. Number of deaths from hypothermia* — United States, 1979–1991**




* *International Classification of Diseases, Ninth Revision,* codes E901.0, E901.8, and E901.9.

The onset of hypothermia is insidious; early manifestations include shivering, numbness, fatigue, poor coordination, slurred speech, impaired mentation, blueness or puffiness of the skin, and irrationality (*3*). Risk factors associated with hypothermia are consumption of alcoholic beverages, using neuroleptic medications, hypothyroidism, mental illness, starvation, poverty, and any immobilizing illnesses (*2*).

Early recognition and prompt treatment of hypothermia can prevent morbidity and death. Most hypothermia deaths can be prevented through measures that include wearing layered, insulated clothing (particularly head gear, because 30% of body heat loss occurs from the head), maintaining adequate fluid and caloric intake, and having adequate heated shelter. Targeting prevention efforts to groups at elevated risk during cold weather and provision of adequate shelter may reduce the number of hypothermia-related deaths.

*References*

1. Kilbourne EM. Cold environments. In: Gregg MB, ed. The public health consequences of disasters. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, 1989:63–8.
2. Berkow R, ed. The Merck manual of diagnosis and therapy. 16th ed. Rahway, New Jersey: Merck and Company, 1992.
3. CDC. Hypothermia—United States. MMWR 1983;32:46–8.

*International Notes*

# Progress Toward Poliomyelitis Eradication — People's Republic of China, 1990–1994

In 1988, the Western Pacific Region of the World Health Organization (WHO) adopted a resolution to eradicate poliomyelitis from the region by the end of 1995. Since then, the People's Republic of China (1993 population: 1.2 billion) has made substantial progress toward the eradication of polio by initiating supplementary vaccination activities with oral poliovirus vaccine (OPV) in 1990. This report updates these efforts and describes the impact of China's first National Immunization Days (NIDs)* during 1993–1994 (*1*).

**National Immunization Days**

During the first NIDs on December 5 and 6, 1993, and January 5 and 6, 1994, the numbers of children aged 0–47 months vaccinated in all 30 provinces in China were 82 million and 83 million, respectively. NIDs specifically targeted children with no previous history of OPV receipt. As a result, 31% of children aged <1 year, 6% of children aged 1 year, 4% of children aged 2 years, and 2% of children aged 3 years who were vaccinated during NIDs had not previously received OPV.

During September–October 1994, two rounds of additional supplemental vaccinations targeting all children aged <4 years were conducted in seven high-risk provinces in southern and western China where type 1 wild poliovirus was detected in 1993 (Fujian, Guangdong, Guizhou, Hainan, Qinghai, and Xinjiang) or where continued transmission was suspected (Yunnan). Provincewide vaccination rounds were conducted in Fujian, Guangdong, and Hainan, and in selected counties in the remaining provinces. However, of eight counties in Guizhou with a wild poliovirus isolated in 1993, five were not included in the supplemental vaccination rounds because of a shortage of funds.

**Surveillance for Polio**

Eradication of disease requires a surveillance system that can detect a single case. China and many other polio-endemic countries have developed a system in which any case of acute flaccid paralysis (AFP) in a person aged <15 years is reported as a suspected case of polio. Effective AFP surveillance can detect an annual incidence of at least one case of AFP per 100,000 persons aged <15 years (*2*). Two stool specimens are collected from each suspected case at an interval of 24–48 hours to determine the presence of poliovirus; however, the standard WHO case definition† permits an AFP case to be confirmed as polio if it meets any of four criteria, including the isolation of poliovirus from a stool specimen.

Following a nationwide outbreak during 1989–1990, reported cases of confirmed polio† reached a historic low of 653 in 1993 (Figure 1). Of 1818 persons reported with

*Mass campaigns over a short period (days to weeks) in which two doses of OPV are administered to all children in the target age group, regardless of prior vaccination history, with an interval of 4–6 weeks between doses.

†A confirmed case of polio is defined as AFP and at least one of the following: 1) laboratory-confirmed wild poliovirus infection, 2) residual paralysis at 60 days, 3) death, or 4) no follow-up investigation at 60 days. The data reported from China are from the national AFP reporting system (provisional data through October 12, 1994).

*Poliomyelitis — Continued*

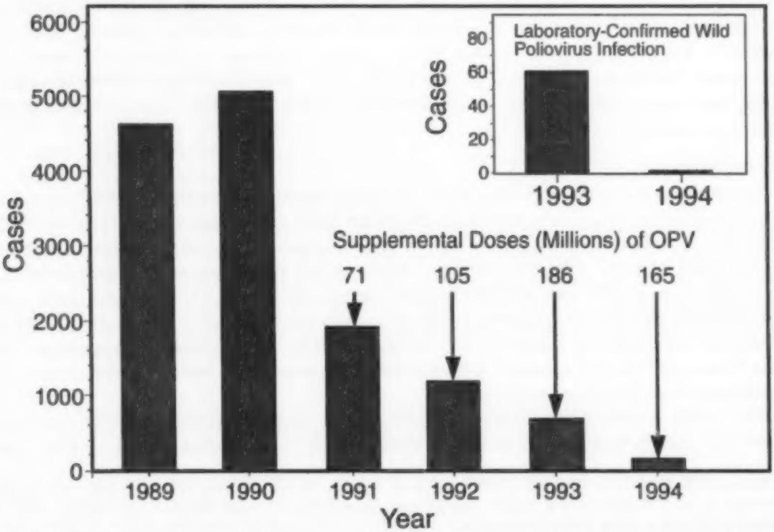
AFP in 1993, 64% had at least one stool specimen collected; wild polioviruses were isolated from 60 persons in five southern provinces (Fujian, Guangdong, one county in Hunan province bordering Guangdong, Hainan, and Guizhou) and two western provinces (Qinghai and Xinjiang). Among the 56 persons for whom age was known, 42 (75%) were children aged 0–23 months and 54 (96%) were children aged <4 years; among the 52 persons for whom vaccination status was known, 37 (71%) had received either no doses or one previous dose of OPV.

During January–October 1994, a provisional total of 114 cases of confirmed polio[†] were reported; of 1234 persons reported with AFP, 72% had at least one stool specimen collected. During this period, one wild type 1 poliovirus was found in a child aged 1 year from Kashgar prefecture in Xinjiang autonomous region (province), with onset of paralysis on February 20, 1994.

The rate of reported AFP patients per 100,000 children aged <15 years increased from 0.3 in 1993 to 0.8 during January–September 1994. However, in 11 of 30 prov-

[†]A confirmed case of polio is defined as AFP and at least one of the following: 1) laboratory-confirmed wild poliovirus infection, 2) residual paralysis at 60 days, 3) death, or 4) no follow-up investigation at 60 days. The data reported from China are from the national AFP reporting system (provisional data through October 12, 1994).

**FIGURE 1. Reported cases of poliomyelitis,* supplemental doses of oral poliovirus vaccine (OPV) administered, and cases of laboratory confirmed wild poliovirus infection — People's Republic of China, 1989–1994[†]**




*A confirmed cases of polio is defined as acute flaccid paralysis (AFP) and at least one of the following: 1) laboratory-confirmed wild poliovirus infection, 2) residual paralysis at 60 days, 3) death, or 4) no follow-up investigation at 60 days. The reports from China are from the national AFP reporting system.

[†]Provisional data through October 12, 1994.

*Poliomyelitis — Continued*

inces, the rate of reported AFP cases per 100,000 children aged <15 years was <0.5, below the reference rate of ≥1.0 per 100,000 children aged <15 years used to define a sensitive AFP surveillance system. In addition, the percentage of reported AFP patients with at least one stool specimen collected increased from 64% in 1993 to 72% in 1994. In 1994, 55% of AFP patients had one stool specimen collected within 0–14 days of onset of paralysis, and 44% had two stool specimens.

During January–October 1994, 23 contiguous provinces in China with a total population of 982 million persons reported no wild polioviruses. During this period, stool specimens from 2039 AFP patients were collected and tested for poliovirus.

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**Editorial Note:** The findings in this report suggest that the NIDs in China during 1993–1994 were highly effective in reducing circulating wild poliovirus to low levels in China. Before the NIDs, wild poliovirus was documented in five southern provinces and two western provinces. Following the NIDs, wild poliovirus has been detected in only one prefecture in the remote western part of China. The decline in reported cases of polio and in the number of cases with wild poliovirus has occurred despite improvement in the sensitivity of surveillance. Collaborative efforts involving Rotary International, United Nations Children's Fund (UNICEF), and other private organizations and government agencies have been integral to the polio-eradication strategies in China.

Continued progress toward achieving polio eradication in China will require at least five strategies: 1) improving reporting of AFP patients to achieve a rate of ≥1.0 per 100,000 children aged <15 years; 2) increasing to 80% in all provinces the percentage of AFP patients with two stool specimens within 0–14 days of onset of paralysis; 3) intensifying surveillance and supplemental vaccination in areas that might have circulating wild poliovirus (i.e., Guizhou province and Kashgar prefecture); 4) using a more specific surveillance case definition based on virologic confirmation of AFP cases (a strategy already being implemented in China); and 5) preventing reimportation of wild poliovirus into China from other neighboring polio-endemic countries. The second annual NIDs are scheduled for December 5 and 6, 1994, and January 5 and 6, 1995.

The successful eradication of wild poliovirus in the Americas and the experience in China suggest that a rapid reduction of wild poliovirus circulation can occur in virtually any geographic area if appropriate strategies and sufficient efforts are applied (*3*). The progress toward polio eradication in China indicates that the goal of eradicating wild poliovirus from the Western Pacific Region can be achieved.

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